NORTH CAROLINA WATER TREATMENT FACILITY OPERATORS CERTIFICATION BOARD

Rating Values for Classification & Reclassification of Water Treatment Systems (15A NCAC 18D .0203 - .0205)

SYSTEM NAME: _____ **PWSID:** _____ **DATE:** _____

PWSS Region: _____ **Type (CWS, NTNC, TNC):** _____ **New or Changed Class (N-C-NO):** _____

System Treatment Classification (A, B, C, D): _____ **Source (Surface or Well):** _____

Class C (1-50 points), Class B (51-110 points), Class A (over 110 points) **Purchase (Y/N):** _____

Class D-Well for non-community systems with hypochlorite solution as the only treatment applied to the water.

Distribution System Classification (A,B,C,D): _____ (Greater of treatment vs. service connection/fire protection class)

Service Connections: _____ **Fire Protection (Y/N):** _____

Class D (100 or fewer service connections, no fire protection), Class C (101 to 1,000 service connections, no fire protection)
Class B (1,001 to 3,300 connections, no fire protection or ≤ 1,000 connections with fire protection), Class A (>3,300 connections)

Cross-Connection-Control Classification Required (Y/N): _____

(Five or more testable backflow prevention assemblies required within the distribution system)

PARAMETER	RATING VALUE	POINTS
(1) Surface Water Source		
(A) flowing stream	5	
(B) flowing stream with impoundments	7	
(C) raw water treatment ($CuSO_4$, etc.)	3	
(2) Ground Water Source		
(A) first five wells	5	
(B) add 1point per 5 wells or fraction thereof over 5	1	
(3) Coagulation		
(A) aluminum sulfate, ferric chloride, etc.	10	
(B) polymer	5	
(4) Mixing		
(A) baffle	2	
(B) mechanical	4	
(C) air	3	
(5) Oxidation (pre-treatment)		
(A) ClO_2	5	
(B) ozone	5	
(C) $KMnO_4$	3	
(D) Cl_2	3	
(6) Carbon Treatment	2	
(7) Aeration		
(A) mechanical draft	3	
(B) coke tray/splash tray	2	
(C) diffused	3	
(D) packed tower (VOC reduction)	10	
(8) pH Adjustment (primary)		
(A) caustic NaOH	10	
(B) lime/ soda ash	3	
(C) acid (H_2SO_4, HCl, etc.)	10	
(9) Sedimentation		
(A) standard rate	5	
(B) tube settlers	3	
(C) upflow	8	
(D) pulsators and plates, etc.	5	
(10) Contact Tank	1	
(11) Filtration		
(A) pressure		
(i) sand/ anthracite	8	
(ii) synthetic media (birm)	8	
(iii) granular activated carbon (GAC)	10	
(B) gravity		
(i) sand	10	
(ii) anthracite (mixed)/ GAC	12	
(iii) with surface wash or air scour	2	
(C) membrane (microfiltration, ultrafiltration)	10	
(12) Ion Exchange		
(A) softener, Na cycle	5	
(B) softener, H cycle	7	
(C) Fe and Mn (greensand)	10	
(D) mixed bed or split stream	12	

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SYSTEM NAME: _____ **PWSID:** _____ **DATE:** _____

PARAMETER	RATING VALUE	POINTS
(13) Lime Softening		
(A) spiractors	10	
(B) clarifier with coagulation	12	
(C) fuel burner (recarbonation)	5	
(14) Phosphate (sequestering agent)	5	
(15) Stabilization		
(A) acid feed	10	
(B) phosphate	2	
(C) caustic (NaOH)	10	
(D) lime/ soda ash	3	
(E) contact units (calcifier, etc.)	5	
(16) Reverse Osmosis (nanofiltration), Electrodialysis	15	
(17) Disinfection		
(A) gas Cl_2	10	
(B) hypochlorite solution	7	
(C) ClO_2 (chlorine dioxide)	13	
(D) ozone	13	
(E) ammonia and Cl_2	12	
(F) ultraviolet light (uv)	5	
(18) Fluoridation		
(A) saturator	8	
(B) dry feed	8	
(C) solution (acid)	10	
(19) Pumping		
(A) raw	3	
(B) intermediate	1	
(C) finished	3	
(D) system booster	2	
(20) Storage		
(A) raw	1	
(B) treated ground level tank	1	
(C) elevated in system (each extra tank 1 pt)	2	
(D) hydropneumatic	2	
(21) Population Served		
1 point per 1,000 persons served	50 max.	
(22) Plant Capacity		
1 point per 1 MGD capacity	25 max.	
(23) On-Site Quality Control		
(A) bacteriological		
(i) MPN/MF	5	
(ii) HPC	2	
(iii) MMO-MUG (Colilert)	2	
(B) pH		
(i) meter	2	
(ii) test kit	1	
(C) flouride		
(i) meter	3	
(ii) colorimetric	3	
(D) chlorine		
(i) titrator	3	
(ii) colorimeter/ spec.	2	
(iii) test kit	1	
(E) iron	1	
(F) hardness	1	
(G) alkalinity	1	
(H) turbidity	1	
(I) manganese	1	
(J) others (1 pt. Each)	1	
(K) A.A. Spec, or G.C. Unit	5 each	

Signature: _____ **Total Points** _____

(Printed Name: _____ , _RO/PWSS)